

REMARKS

This Amendment is filed in response to the Office Action dated March 24, 2006.

All objections and rejections are respectfully traversed.

Claims 1-28 are in the case.

Claims 24-28 were added to better claim the invention.

Claims 1-2, 7-8, 10-11, 12-13, 16, and 18-19 were amended to better claim the invention.

Claims 2, 9 and 23 have been cancelled without prejudice.

Rejections Under 35 U.S.C. § 112

At paragraph 1 of the Office Action, the Examiner rejected claim 19 under 35 U.S.C. § 112, second paragraph for insufficient antecedent basis. Applicant thanks the Examiner for pointing out the typographical errors in claim 19 which have been corrected by way of this Amendment.

Rejections Under 35 U.S.C. § 101

At paragraph 3 of the Office Action, claims 17 and 23 were rejected under 35 U.S.C. § 101 as not being tangibly embodied in a manner so as to be executable.

As noted, claim 23 has been cancelled without prejudice.

The present invention, as set out in representative claim 17, comprises:

17. A computer-readable medium *operating on a computer* in a network that includes a removable nonvolatile memory device having a plurality of partitions, the computer-readable medium including program instructions for performing the steps of:
- storing a new kernel image on a storage device;
 - copying a current boot kernel from a current boot kernel location to a last known good kernel location; and
 - copying the new kernel image to the current boot kernel location.

Applicant respectfully points out that MPEP 2106 IV, B. 1 (a) (Page 2106 of the Eighth Edition) states:

Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and Office personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material. When a computer program is claimed in a process where *the computer is executing the computer program's instructions*, Office personnel should treat the claim as a process claim.

Applicant respectfully points out that the form of claim 17 meets the required "tangibly embodied...manner so as to be executable" requirement of MPEP 2106 IV, B, 1 (a) because the "computer-readable medium [is] *operating on a computer*".

Accordingly, Applicant respectfully urges that claim 17 meets the statutory requirements of 35 U.S.C. § 101.

Rejections Under 35 U.S.C. § 102

At paragraph 6 of the Office Action, claims 1-4, 7-10 and 13-23 were rejected under 35 U.S.C. § 102(e) as being unpatentable in view of Fuse, et. al., U.S. Patent No. 6,981,136 issued on December 27th, 2005 (hereinafter “Fuse”).

The present invention, as set forth in representative claim 1 comprises:

1. A removable nonvolatile memory device for use in a storage system having an operating system kernel, comprising:
 - a plurality of partitions, each of the plurality of partitions capable of storing differentiated information;
 - a first kernel image, the first kernel image stored in a first partition of the plurality of partitions wherein the first kernel image is an *upgrade kernel*; and
 - a second kernel image, the second kernel image stored in a second partition of the plurality of partitions, wherein the second kernel image is a *last known good kernel*.

Fuse teaches a method for “providing an external storage apparatus which is capable of effectively using a storage region...which an error cannot easily be made when boot data is read and which exhibits satisfactory reliability.” (Col. 2, lines 1-13). Satisfactory reliability is achieved by always “[storing copies of boot data] in two [separate] effective blocks.” (Col 12, lines 51-60). Essentially, two *identical* copies of boot data are constantly available in the memory card. (*Id*). Changes to either identical boot block occur only “if an error is made in the block [attempting] to be the boot block.” (Col 14, lines 16-25). Should such an error occur, Fuse will copy boot data from an error free

boot block on the memory card and use that copy to overwrite the first boot block on the memory card until “two [identical] effective blocks...are made to be a boot block and a spare boot block.” (*Id.*).

Applicant respectfully urges that Fuse does not show Applicant’s claimed novel use of upgrading the boot kernel via an *upgrade kernel* while still maintaining a *last known good kernel*.

Fuse teaches a method to “[reconstitute a first boot block] with boot data read from the second boot block” in the event of a boot error. (Col. 15, lines 55-62). This creates identical copies of the boot kernel from copies already stored on the memory card. Applicant’s invention is distinct from Fuse, in that Applicant allocates two partitions for a *last known good kernel* and an *upgrade kernel*.

Applicant’s *last known good kernel* is copied and stored on a memory card when an upgrade is initiated. The source of the *last known good kernel* is derived from “the kernel that was most recently booted” from the storage operating system. (Page 5, lines 25-30). The source of Fuse’ boot kernel is derived, not from the boot kernel, but from a previous copy already on the memory card, and as such, is merely duplicated from an older copy. Thus, Applicant’s *last known good kernel* is more up-to-date than Fuse’s copy.

Applicant's *upgrade kernel* is also different from the system described by Fuse. Applicant employs an *upgrade kernel* on the memory card to be used in conjunction with the *last known good kernel* as a precautionary measure. "When the kernel is to be upgraded...the [original] kernel that was most recently booted from, is copied into a last known good kernel partition (the second partition) on the removable nonvolatile memory device." (Page 5, lines 25-30). This ensures that should an error occur while upgrading the kernel, there is still a previous copy, or *last known good kernel*, available from which to boot. Next, "the upgrade kernel is then copied into the first partition of the removable nonvolatile memory device." (*Id.*)

Examiner should note that there is now a copy of the *last known good kernel* and a copy of the updated boot kernel in the *upgrade kernel*. This is distinctive from Fuse which can only have some previous copy of the boot kernel in its memory card. Upon reboot, it is the new *upgrade kernel* which will be loaded and executed. Should an error occur during this time, *the last known good kernel* can be utilized. (*Id.*) It should be noted that nowhere in Fuse does updated kernel information get stored on the memory card to later be loaded and executed to the storage operating system.

Applicant respectfully urges that Fuse is legally precluded from anticipating the claimed invention under 35 U.S.C. § 102 because of the absence from the Fuse patent of Applicant's novel use of a *last known good kernel* or *upgrade kernel*.

Similarly, independent claims 7, 13, 17, 18, 21, 23 and dependent claims 2-6, 8-12, 14-16, 19-20 and 22 also include limitations of either a *last known good kernel* and/or an *upgrade kernel*. As noted above, Fuse does not teach or disclose the concept of a *last known good kernel* or an *upgrade kernel*. As such, Fuse does not anticipate these claims.

Rejections Under 35 U.S.C. § 103

At paragraph 22 of the Office Action, claims 5-6 and 11-12 were rejected under 35 U.S.C. § 103(a) as being obvious in light of Fuse in combination with Official Notice of using diagnostic logs and using diagnostic software. Applicant respectfully traverses the Examiner's Official Notice.

Claims 5-6 and 11-12 are dependent upon independent claims 1 and 7 respectively which are believed to be in condition for allowance. Thus, claims 5-6 and 11-12 are believed to be allowable as they depend upon an allowable base claim.

All independent claims are believed to be in condition for allowance.

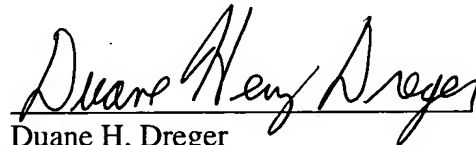
All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.

Favorable action is respectfully solicited.

Should the Examiner feel personal contact is required to discuss this matter further, please do not hesitate to call the undersigned attorney at (617) 951-2500.

Please charge any additional fee occasioned by this paper to our Deposit Account
No. 03-1237.

Respectfully submitted,

A handwritten signature in black ink, reading "Duane H. Dreger", written over a horizontal line.

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